

IN THE CLAIMS:

1 (currently amended). A method of forming a weld between workpieces over a joint region, the method comprising:

providing a radiation absorbing material at the joint region that has an absorption band matched to a wavelength of incident radiation so as to absorb the incident radiation and generate heat, the wavelength of the incident radiation being outside the visible range;

exposing the joint region to incident radiation having a wavelength outside the visible range so as to cause melting of the surface of at least one or both workpieces workpiece at the joint region;

allowing the melted material to cool thereby welding so as to weld the workpieces together, the method further comprising providing a radiation absorbing material at the joint region in one of the workpieces or between the workpieces which has an absorption band matched to the wavelength of the incident radiation so as to absorb the incident radiation and generate heat for the melting process, the radiation absorbing material being visually transmissive so that the material does not substantially affect the appearance of the joint region or the workpieces in visible light;

wherein the workpieces include a first workpiece and a second workpiece, the first workpiece being any one of clear to translucent, the second workpiece being any of one of tinted to opaque, and the radiation absorbing material being a radiation absorbing dye that is visually

transmissive when the workpieces are welded together and when viewed through the first workpiece.

2 (original). A method according to claim 1, wherein the radiation absorbing material is sandwiched between two workpieces.

3 (original). A method according to claim 1, wherein the radiation absorbing material is provided in at least one of the workpieces.

4 (original). A method according to claim 1, wherein the radiation absorbing material is provided on a substrate by moulding the substrate in a mould with an insert formed by or including the radiation absorbing material.

5 (original). A method according to claim 1, wherein the radiation absorbing material is provided as a coating on a substrate.

6 (original). A method according to claim 1, wherein the radiation absorbing material is provided by coextruding the material with a substrate.

7 (currently amended). A method according to claim 1 any of the preceding claims, wherein the radiation absorbing material is exposed to radiation prior to positioning the workpieces together.

8 (currently amended). A method according to claim 1 any of the preceding claims, wherein the radiation absorbing material is exposed to radiation through one of the workpieces.

9 (currently amended). A method according to claim 1 any of the preceding claims, wherein the workpieces are made of plastics.

10 (cancelled).

11 (currently amended). A method according to claim 1 any of the preceding claims, wherein the lower limit of the absorption band is above 700nm.

12 (original). A method according to claim 11, wherein the absorption band defines the range 780-1100nm.

13 (currently amended). A method according to claim 1 any of claims 1 to 11, wherein the absorption band defines the range 820-860nm.

14 (currently amended). A method according to claim 1 any of claims 1 to 11, wherein the absorption band lies in the infrared range.

15 (currently amended). A method according to claim 1 any of the

~~preceding claims~~, wherein the absorption band does not include the range 400-700nm.

16 (currently amended). A method according to claim 1 any of the preceding claims, wherein the radiation is in the infrared range.

17 (currently amended). A method according to claim 1 any of the preceding claims, wherein the wavelength of the incident radiation lies in the range 700-2500nm.

18 (original). A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 790-860nm.

19 (original). A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 940-980nm.

20 (currently amended). A method according to claim 1 any of the preceding claims, wherein the radiation is a laser beam.

21 (currently amended). A pair of workpieces which have been welded by a method according to claim 1 any of the preceding claims.

22 (new). A method according to claim 1, wherein the workpieces comprise fabrics.

23 (new). A method according to claim 22, wherein the fabrics are nylon-based fabrics.

24 (new). A method according to claim 22, wherein the fabrics are polyurethane coated.

25 (new). A method according to claim 22, wherein the fabrics comprise polyamide/polytetrafluoroethylene laminated fabrics.

26 (new). A method according to claim 1, wherein the workpieces comprise thin films such as polyester or fluoropolymer.

27 (new). A method according to claim 9, wherein the workpieces are made of thermoplastic.

28 (new). A method according to claim 27, wherein the thermoplastic workpieces are textiles.

29 (new). A method according to claim 9, wherein the workpieces are thermoplastic films.